

In the Office Action dated February 12, 2002, the Examiner rejected claims 1-5, 7, 16, and 19 under 35 U.S.C. §102(e), and rejected claims 11 and 15 under the provisions of 35 U.S.C. §103. In addition, the Examiner stated that claims 6, 9, 10, and 18 were objected to as being dependent on a rejected base claim, but would be allowable if re-written to include all the limitations of the base claim and any intervening claims.

In response to the Office Action mailed February 12, 2002, each one of the cited references has been reviewed and the rejections and objections made to the claims by the Examiner have been considered. Claim 1 of the present application has been amended to more clearly recite the novel features of the presently claimed invention. For the reasons set forth below, it is submitted that all the claims are in condition for allowance and allowance of the application is respectfully requested.

Rejections under 35 USC §102

In the Office Action dated February 12, 2002, independent claims 1 and 19, and dependent claims 2, 5, and 7 were rejected under 35 USC §102(e) as being anticipated by United States Pat. No. 5,975,367, issued to Coelho et al. (hereinafter *Coelho '367*). Also, independent claim 1 and dependent claims 3, 4, and 16 were rejected under 35 USC §102(b) as being anticipated by United States Pat. No. 4,935,006, issued to Hasson. (hereinafter *Hasson '006*). For the reasons set forth below, the Applicants respectfully traverse the rejections and respectfully submit that the pending claims define patentable subject matter over the cited prior art.

The presently claimed invention is directed to an improved component mixing catheter and includes a catheter for delivering sealant and a mixing volume within the catheter for mixing components of the multi-component sealant prior to discharge from a distal end of the catheter. In addition, the present application further discloses a method of applying a multi-component sealant to anatomical surfaces, and includes flowing multiple sealant components through a longitudinally compartmented catheter and mixing the components in the catheter immediately prior to discharge.

Claims 1, 2, 5, 7, and 19

The *Coelho '367* reference is directed to a fibrin glue line and dot dispenser. *Coelho '367* discloses a support device for receiving a first syringe plunger containing thrombin and a second syringe body containing fibrinogen, a holder which engages the

plungers of the syringes, an urging device coupling the support device and the holder, and a device for controlling the rate at which the contents of the syringes are dispensed integral with the support device, the urging device, and the holder. In addition, the urging device is capable of pushing the plungers from an extended position to a retracted position wherein the plungers will force out the contents of the syringes.

Unlike the presently claimed invention, which includes a mixing volume to mix the components of the multi-component sealant prior to dispensing the mixed material from the applicator, the *Coelho* '367 reference states that "the exit 29 of the central passage way 28 is removed from the exit 27 by a distance d." (Col. 5, l. 20-22). "This increases the likelihood that one compound will be dispensed in advance of the other when using the dispenser 10 so that the thrombin will not come into contact with the fibrinogen especially near the fibrinogen exit." (Col. 5, l. 22-26). Thus, the *Coelho* '367 device dispenses the individual components of the sealant in separate streams and mixes the material external to the dispenser. Unlike the *Coelho* '367 reference, the presently claimed invention teaches an applicator which includes a mixing volume within the applicator and mixes the components of the multi-component sealant within the applicator. Thus, the *Coelho* '367 reference teaches away from the present invention.

For at least the reasons stated above, it is respectfully submitted that independent claims 1 and 19 are neither anticipated nor rendered obvious by the *Coelho* '367 reference. Moreover, for at least the same reasons, it is submitted that dependent claims 2, 5, and 7 are also patentable. However, these remaining dependent claims recite features that are also novel and nonobvious over the cited prior art and thus are independently patentable over claims 1 and 19.

Claims 1, 3-4, and 16

The *Hasson* '006 reference pertains to a suction and irrigation device with a right angle and oblique openings, which includes a first tube connectable at its proximate end to a vacuum source and open at its distal end to provide suction to the distal end, a second tube having a lengthwise axis disposed around the first tube to define an outer channel therebetween, and a device for discharging fluid irrigation from the outer channel at the distal end of the device. The distal end of the device may include a plurality of openings extending obliquely through the second tube, the opening being arranged in annular arrays

and positioned to permit a random fluid discharge that showers the area around the second tube.

Unlike the presently claimed invention, which includes a mixing volume to mix various components of a multi-component sealant prior to dispensing the material from the applicator, the *Hasson '006* device fails to mix any material or fluid within the applicator prior to discharge.

For at least the reasons stated above, it is respectfully submitted that independent claim 1 is neither anticipated nor rendered obvious by the *Hasson '006* reference. Moreover, for at least the same reasons, it is submitted that dependent claims 3-4, and 16 are also patentable. However, these remaining dependent claims recite features that are also novel and nonobvious over the cited prior art and thus are independently patentable over claim 1.

Rejections under 35 USC §103

In the Office Action dated February 12, 2002, dependent claims 11 and 15, which variously depend on independent claim 1, were rejected under 35 USC §103(a) as being obvious in view of *Coelho '367*. For the reasons set forth below, the Applicants respectfully traverse the rejections and respectfully submit that the pending claims define patentable subject matter over the cited prior art.

The rejections of dependent claims 11 and 15 must fail for at least the same reasons as set forth in the traversal of the rejections of claims 1, 2, 5, 7, and 19 under 35 U.S.C. §102 above. In short, the *Coelho '367* reference fails to disclose or suggest the elements of independent claims 1, and, therefore, fails as a primary reference at the outset. More specifically, the *Coelho '367* reference fails to include any teaching or suggestion of including a mixing volume in the applicator thereby permitting the components of a multi-component sealant to be mixed within the applicator prior to dispensing the material. Thus, the cited reference does not disclose or suggest the novel features of the present invention as claimed.

For at least the reasons stated above, it is respectfully submitted that claims 11 and 15 are not obvious in light of *Coelho '367* reference.

CONCLUSION

For the foregoing reasons, all claims presently on file in the subject application are in condition for immediate allowance, and such action is respectfully requested.

If it is felt for any reason that direct communication with applicants' attorney would serve to advance prosecution of this case to finality, the Examiner is invited to call the undersigned attorney at the below listed telephone number.

The Commissioner is authorized to charge any fee which may be required in connection with this Amendment to deposit account No. 50-1901.

Respectfully submitted,

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In The Claims

Please amend claim 1 as follows:

1. (Amended) A multi-component sealant applicator comprising:
_____a catheter for delivering sealant; and
_____a mixing volume within the catheter for mixing [sealant]components of a [multiple
sealant]multi-component sealant prior to discharge from a distal end of the catheter.